



INVESTIGATION OF THE HEALTHY LIFESTYLE BEHAVIOR OF AFAD SEARCH AND RESCUE TECHNICIANS IN TERMS OF VARIOUS VARIABLES

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Abstract:

Due to its tectonic structure, Turkey is one of the most earthquake-prone countries where a large part of its lands is under seismic danger. The aim of this study; The aim of this study is to examine the healthy lifestyle behaviors of Turkey AFAD Search and Rescue Technicians in terms of various variables and to evaluate their healthy lifestyle behaviors. 112 AFAD search and rescue technicians were included in the study. A structured questionnaire consisting of two parts was used as the data collection method in the research. In the first part of the form, a questionnaire consisting of questions determining the descriptive features was applied, and in the second part, the healthy lifestyle behaviors scale was applied. The validity and reliability study of the scale was carried out by Bahar et al. in 2008 and it was adapted to Turkish. SPSS statistical package program was used for statistical analysis of the obtained data. As a result of the analysis of the data obtained, all of the search and rescue technicians (n:111) participating in the study were male, and more than half of them (87.4%) were married. The age range in which the participants are concentrated is between 42-49 and 63.1% (n:70). 77.5% (n:86) of Search and Rescue Technicians are undergraduate graduates and 37.8% (n:42) of them have been doing this job for 16-20 years. A statistically significant difference was found between the healthy lifestyle total scores and sub-dimension scores of the participants in terms of sleep, marital status, branch, education status and age ($p < 0.05$). In terms of smoking addiction, experience, body mass index, alcohol use and chronic disease variables, no statistically significant difference was found between healthy lifestyle total scores and sub-dimension scores ($p < 0.05$). As a result, healthy lifestyle behaviors of AFAD search and rescue technicians were not at a sufficient level and it is thought that it would be appropriate to carry out studies to develop them. For all that it is thought that the number of female search and rescue technicians is insufficient and it would be beneficial to carry out studies to increase it.

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1. Introduction

Turkey is one of the most earthquake-prone countries where a large part of its lands are under seismic danger due to its tectonic structure (1). Many natural disasters occur and people lose their lives due to global warming and the changing climates (2, 3).

Because of the direct and indirect effects of disasters, disaster management and teams are of great importance. Working environment, psychological and physical environment conditions in disaster management make it difficult for the team working in the disaster area (4).

In addition to natural disasters, people lose their lives, get injured, become stranded and wait for help due to accidents that occur for various reasons. In such incidents, search and rescue teams go to the aid of the victims (3). In addition, the probability of surviving in the rescues made in the first hours of the accident or disaster is high. So much so that this rate was expressed as 50% for the first 24 hours (5). Disaster management is of great importance as disasters cause loss of life, health problems and decrease in quality of life (6).

Search and rescue teams are in charge of intervening people in need of rescue in case of disappearances and accidents, earthquakes and natural disasters, providing basic first aid support and ensuring their referral to safe environment conditions. It is vital that search and rescue technicians, who work in such a heavy and complex job, fulfill these duties with great devotion in search and rescue activities. While performing these duties, it is of great importance that they are physically present in addition to many factors such as technical knowledge, experience and decision-making skills (3).

Because of the direct and indirect effects of disasters, disaster management and teams are of great importance. Working environment, psychological and physical environment conditions in disaster management make it difficult for the team working in the disaster area (3).

In some search and rescue operations, teams may work for hours or even days and may have to respond to survivors in hard-to-reach places. Considering these duties, it is thought that it is of great importance to have healthy lifestyle behaviors at an active level in order for search and rescue technicians to manage long hours of search and rescue activities in the best way. In addition, as a result of the accessible literature review, no study was found on healthy lifestyle behaviors on search and rescue teams.

2. Material and Method

This research is a descriptive study to examine the healthy lifestyle behaviors of Turkey AFAD Search and Rescue Technicians in terms of various variables and to evaluate their healthy lifestyle behaviors. In this study, it is aimed to examine the healthy lifestyle behaviors of Turkey AFAD Search and Rescue Technicians in terms of various variables

and to evaluate their healthy lifestyle behaviors. These variables were selected as marital status, gender, education level, length of work in the profession, branch, number of jobs, body mass index (BMI), age, alcohol and cigarette use, whether there is a chronic disease, and how many hours a day sleep.

2.1 Collection of Data

A structured questionnaire consisting of two parts was used as the data collection method in the research. In the first part of the survey; There are questions about the demographic characteristics of the participants. Here are the questions: Gender, marital status, education level, city of employment, years of work in the profession, branch, number of positions, body mass index (BMI), age, alcohol and cigarette use, whether there is a chronic disease, how many hours a day sleeps can be listed as. In the second part of the questionnaire, a 52-item Healthy Lifestyle Behavior Scale was used to evaluate the healthy lifestyle behaviors of AFAD Search and Rescue Technicians. In the study, demographic characteristics were the independent variable; scale items were accepted as dependent variables and the relationship between them was examined. The Healthy Lifestyle Behaviors Scale was revised in 1996 and expressed as the "Healthy Lifestyle Behaviors Scale II" (7). The validity and reliability study was conducted by Bahar et al. in 2008 and it was adapted into Turkish (8).

2.2 Statistical Analysis

SPSS statistical program (SPSS for Windows, version 20.0, 2008, SPSS Inc. Chicago, Illinois, USA) was used for statistical analysis of the obtained data. The results obtained from the data were evaluated according to the 95% confidence interval ($p < 0.05$). Mean value, maximum, minimum and standard deviation were used as descriptive parameters. Kolmogorov-Smirnov and Shapiro-Wilk tests for data sets required in normality distribution tests of the data; Levene's Test of Homogeneity tests were used to control the homogeneous distribution.

In data sets with 2 groups, Independent Sample T test was used for normally distributed data sets, and Man Whitney U test was used for data sets that did not show normal distribution. One Way ANOVA test was used for normally distributed datasets where the number of groups is more than 2, Kruskal Wallis test was used for datasets that did not show normal distribution, and the LSD test was used to determine which group the significance was in.

3. Results

Table 1: Distribution of Search and Rescue Technicians
 by Some Descriptive Characteristics (n = 111)

Variables		N	%
Gender	Male	111	100
	Female	0	0
Marital status	Married	97	87,4
	Single	14	12,6
Age	18-25	0	0
	26-33	10	9,0
	34-41	29	26,1
	42 years and older	72	64,9
Educational status	High School	1	0,9
	2 years university degree	16	14,4
	University degree	86	77,5
	Graduate	8	7,2
Experience	7-10	17	15,3
	11-15	26	23,4
	16-20	42	37,8
	21-27	26	23,4
Branch	Urban Search and Rescue	17	15,3
	Search and Rescue in Nature	44	39,6
	Water Search and Rescue	39	35,1
	Chemical Biological Radiological Nuclear Threats	11	9,9
BMI	Weak	0	0
	Normal	23	20,7
	Fat	71	64,0
	Obese 1	17	15,3
Alcohol	Yes	11	9,9
	No	100	90,1
Smoking	Yes	49	44,1
	No	62	55,9
Chronic disease	Yes	7	6,3
	No	104	93,7
Sleep	4-6	32	28,8
	7-9	77	69,4
	10-12	2	1,8

When Table 1 is examined, all Search and Rescue Technicians (n:111) participating in the study are male, and more than half of them (87.4%) are married. The age range in which the participants are concentrated is between 42-49 and 63.1% (n:70). 77.5% (n:86) of Search and Rescue Technicians are undergraduate graduates and 37.8% (n:42) of them have been doing this job for 16-20 years.

Average Body Mass Index (BMI) values are 27.2, 64% (n:71) are overweight and 15.3% (n:17) are observed to be stage I obesity. It was found that 90.1% of the Search and Rescue Technicians participating in the research did not use alcohol and 55.9% did not

smoke. Considering the chronic disease states, it was determined that 93.7% of them did not have a chronic disease. It has been learned that 77% of the technicians sleep between 7-9 hours a day.

Table 2: Examination of the difference between the total score of Healthy Lifestyle Behaviors and its sub-dimensions according to the age variable of the participants (One Way Anova Test)

Dependent variables	Independent variables						p	Difference between groups
	1 N = 10		2 N = 29		3 N = 72			
	Mean	Std.Dev. (±)	Mean	Std.Dev. (±)	Mean	Std.Dev. (±)		
HLBTS	128,30	9,15	132,31	14,51	124,70	16,57	0,086	-
HRSDTS	17,40	4,08	19,96	3,87	18,95	3,62	0,159	-
PASDTS	18,10	3,54	19,10	4,12	17,50	4,14	0,209	-
NSDTS	20,60	1,71	20,44	3,04	18,69	3,80	0,039	2-3
SDSDTS	27,20	3,61	27,65	3,71	27,05	4,62	0,820	-
IRSDTS	26,50	3,68	25,55	3,95	24,38	3,59	0,130	-
SMSDTS	18,50	2,46	19,58	3,07	18,11	3,56	0,142	-

Note: HLBTS: Healthy Lifestyle Behaviors Total Score, HRSDTS: Health Responsibility Sub-Dimension Total Score, PASDTS: Physical Activity Sub-Dimension Total Score, NSDTS: Nutrition Sub-Dimension Total Score, SDSDTS: Spiritual Development Sub-Dimension Total Score, IRSDTS: Interpersonal Relations Sub-Dimension Total Score, SMSDTS: Stress Management Sub-Dimension Total Score, 1 = 26-33 ages, 2 = 34-41 ages, 3 = 42 ages and older.

When Table 2 is examined, no statistically significant difference was found between the Total Healthy Lifestyle Behaviors Score and age according to the age independent variable of the participants. On the other hand, there was a significant difference between the age and the total score of the Nutrition Sub-dimension between the 2nd and 3rd groups in favor of the 2nd group. No statistically significant difference was found between the age variable and other sub-dimensions.

When Table 3 is examined, no statistically significant difference was found between the Total Score of Healthy Lifestyle Behaviors and smoking according to the independent variable of the smoking status of the participants.

Table 3: Comparison of the participants in terms of smoking status (Independent Sample T-Test)

Dependent variables	Independent variables				p
	Yes N = 49		No N = 62		
	Mean	Std.Dev. (±)	Mean	Std.Dev. (±)	
HLBTS	125,40	15,19	128,29	16,21	0,341
HRSDTS	19,02	3,62	19,12	3,88	0,881
PASDTS	17,38	4,20	18,43	4,01	0,184
NSDTS	19,04	3,55	19,54	3,57	0,458
SDSDTS	27,02	4,18	27,38	4,40	0,667
IRSDTS	24,46	3,47	25,20	3,91	0,301
SMSDTS	18,46	3,21	18,58	3,55	0,865

Note: HLBTS: Healthy Lifestyle Behaviors Total Score, HRSDTS: Health Responsibility Sub-Dimension Total Score, PASDTS: Physical Activity Sub-Dimension Total Score, NSDTS: Nutrition Sub-Dimension Total Score, SDSDTS: Spiritual Development Sub-Dimension Total Score, IRSDTS: Interpersonal Relations Sub-Dimension Total Score, SMSDTS: Stress Management Sub-Dimension Total Score

Table 4: Comparison of the total score and sub-dimensions of healthy lifestyle behaviors in terms of the marital status of the participants (Independent Sample T-Test)

Dependent variables	Independent variables				p
	Married N = 97		Single N = 14		
	Mean	Std.Dev. (±)	Mean	Std.Dev. (±)	
HLBTS	127,94	15,81	120,57	14,41	0,102
HRSDTS	19,30	3,65	17,50	4,21	0,092
PASDTS	18,18	4,17	16,50	3,48	0,153
NSDTS	19,17	3,64	20,35	2,81	0,247
SDSDTS	27,53	4,27	25,07	3,89	0,044
IRSDTS	24,87	3,62	24,92	4,53	0,961
SMSDTS	18,86	3,39	16,21	2,35	0,006

Note: HLBTS: Healthy Lifestyle Behaviors Total Score, HRSDTS: Health Responsibility Sub-Dimension Total Score, PASDTS: Physical Activity Sub-Dimension Total Score, NSDTS: Nutrition Sub-Dimension Total Score, SDSDTS: Spiritual Development Sub-Dimension Total Score, IRSDTS: Interpersonal Relations Sub-Dimension Total Score, SMSDTS: Stress Management Sub-Dimension Total Score

When Table 4 is examined, a statistically significant difference was found between the total score of the Spiritual Development Sub-dimension and the total score of the Stress management sub-dimension, in favor of those whose marital status was married, in terms of the marital status of the technicians who participated in the study.

When Table 5 is examined, a statistically significant difference was found in favor of technicians with undergraduate education in the total score of the spiritual development sub-dimension between technicians at the associate degree education level and the technicians with undergraduate education in terms of educational status ($p < 0.05$). No difference was found in other sub-dimensions ($p < 0.05$).

Table 5: Comparison of the total score and sub-dimensions of healthy lifestyle behaviors in terms of the educational status of the participants (One way Anova test)

Dependent variables	Independent variables						p	Difference between groups
	1 N = 17		2 N = 86		3 N = 8			
	Mean	Std.Dev. (±)	Mean	Std.Dev. (±)	Mean	Std.Dev. (±)		
HLBTS	122,00	18,12	127,95	15,62	127,62	15,62	0,365	-
HRSDTS	18,88	3,35	19,12	3,96	19,00	2,26	0,969	-
PASDTS	17,05	4,08	18,00	4,18	19,62	3,24	0,348	-
NSDTS	19,05	3,13	19,60	3,50	16,87	4,42	0,109	-
SDSDTS	24,94	5,40	27,60	3,94	28,00	4,37	0,055	-
IRSDTS	23,94	3,64	25,03	3,73	25,25	4,06	0,525	-
SMSDTS	18,11	3,72	18,58	3,44	18,87	2,10	0,840	-

Note: HLBTS: Healthy Lifestyle Behaviors Total Score, HRSDTS: Health Responsibility Sub-Dimension Total Score, PASDTS: Physical Activity Sub-Dimension Total Score, NSDTS: Nutrition Sub-Dimension Total Score, SDSDTS: Spiritual Development Sub-Dimension Total Score, IRSDTS: Interpersonal Relations Sub-Dimension Total Score, SMSDTS: Stress Management Sub-Dimension Total Score; 1= High School, 2= 2 years university degree, 3= university degree

Table 6: Comparison of the total score and sub-dimensions of healthy lifestyle behaviors in terms of the participants' experience (One way Anova test)

Dependent variables	Independent variables						p	Difference between groups
	1 N = 17		2 N = 69		3 N = 25			
	Mean	Std.Dev. (±)	Mean	Std.Dev. (±)	Mean	Std.Dev. (±)		
HLBTS	128,82	11,99	126,82	16,23	126,32	17,17	0,871	-
HRSDTS	18,29	4,46	19,23	3,754	19,20	3,31	0,648	-
PASDTS	17,82	2,94	18,55	4,364	16,48	3,83	0,096	-
NSDTS	20,29	2,66	19,36	3,307	18,56	4,58	0,300	-
SDSDTS	27,00	4,09	27,10	4,037	27,72	5,17	0,807	-
IRSDTS	27,22	4,29	26,17	3,79	24,50	3,60	0,250	-
SMSDTS	19,23	2,65	18,07	3,52	19,32	3,36	0,189	-

Note: HLBTS: Healthy Lifestyle Behaviors Total Score, HRSDTS: Health Responsibility Sub-Dimension Total Score, PASDTS: Physical Activity Sub-Dimension Total Score, NSDTS: Nutrition Sub-Dimension Total Score, SDSDTS: Spiritual Development Sub-Dimension Total Score, IRSDTS: Interpersonal Relations Sub-Dimension Total Score, SMSDTS: Stress Management Sub-Dimension Total Score; 1=0-10 years, 2=11-20 years, 3= 21 years and above

When Table 6 is examined, no statistically significant difference was found between the technicians' healthy lifestyle behaviors total score and sub-dimension total scores in terms of experience.

Table 7: Comparison of the total score and sub-dimensions of healthy lifestyle behaviors in terms of the branch status of the participants (One way Anova)

Dependent variables	Independent variables								p	Difference between groups
	1 N = 17		2 N = 44		3 N = 39		4 N = 11			
	Mean	Std.Dev. (±)	Mean	Std.Dev. (±)	Mean	Std.Dev. (±)	Mean	Std.Dev. (±)		
HLBTS	130,35	15,73	127,13	16,48	127,38	15,34	120,09	14,30	0,41	-
HRS DTS	19,00	4,21	19,04	3,94	19,43	3,40	18,09	3,80	0,77	-
PAS DTS	16,76	3,84	18,15	4,01	18,84	4,46	16,00	2,79	0,11	-
NS DTS	18,76	3,32	20,27	3,38	18,38	3,99	19,72	1,90	0,09	-
SDS DTS	29,00	4,73	26,56	4,31	27,69	3,73	25,45	4,74	0,09	-
IRS DTS	27,17	4,03	24,72	3,58	24,58	3,24	23,00	4,31	0,02	1-4
SMS DTS	19,64	3,20	18,36	3,767	18,43	3,15	17,81	2,92	0,48	-

Note: HLBTS: Healthy Lifestyle Behaviors Total Score, HRS DTS: Health Responsibility Sub-Dimension Total Score, PAS DTS: Physical Activity Sub-Dimension Total Score, NS DTS: Nutrition Sub-Dimension Total Score, SDS DTS: Spiritual Development Sub-Dimension Total Score, IRS DTS: Interpersonal Relations Sub-Dimension Total Score, SMS DTS: Stress Management Sub-Dimension Total Score; 1= Urban Search and Rescue, 2= Search and Rescue in Nature, 3= Water Search and Rescue, 4 = Chemical Biological Radiological Nuclear Threats

Table 8: Comparison of the total score and sub-dimensions of healthy lifestyle behaviors in terms of body mass index status of the participants (One way Anova test)

Dependent variables	Independent variables						p	Difference between groups
	1 N = 17		2 N = 86		3 N = 8			
	Mean	Std.Dev. (±)	Mean	Std.Dev. (±)	Mean	Std.Dev. (±)		
HLBTS	126,13	17,67	128,09	15,76	123,70	13,21	0,565	-
HRS DTS	18,56	4,09	19,42	3,68	18,35	3,63	0,441	-
PAS DTS	19,13	4,65	17,54	4,08	18,17	3,30	0,273	-
NS DTS	18,78	3,60	19,67	3,69	18,58	2,78	0,380	-
SDS DTS	26,47	4,84	27,70	4,02	26,23	4,53	0,291	-
IRS DTS	24,21	3,50	25,14	3,86	24,70	3,54	0,579	-
SMS DTS	18,95	3,53	18,60	3,41	17,64	3,12	0,465	-

Note: HLBTS: Healthy Lifestyle Behaviors Total Score, HRS DTS: Health Responsibility Sub-Dimension Total Score, PAS DTS: Physical Activity Sub-Dimension Total Score, NS DTS: Nutrition Sub-Dimension Total Score, SDS DTS: Spiritual Development Sub-Dimension Total Score, IRS DTS: Interpersonal Relations Sub-Dimension Total Score, SMS DTS: Stress Management Sub-Dimension Total Score; 1= Normal, 2= Fat, 3= Obese 1

When Table 7 is examined, a statistically significant difference was found between the total score of the technicians' healthy lifestyle behaviors and sub-dimension total scores in terms of branch status, between Urban and CBRN, in favor of Urban.

When Table 9 is examined, no statistically significant difference was found between the technicians' healthy lifestyle behaviors total score and sub-dimension total scores in terms of body mass index status ($p < 0.05$).

Table 9: Comparison of the total scores of SYBDTP and sub-dimensions in terms of alcohol use status of the participants (Independent Sample T-Test)

Dependent variables	Independent variables				p
	Yes N = 11		No N = 100		
	Mean	Std.Dev. (±)	Mean	Std.Dev. (±)	
HLBTS	126,09	22,08	127,12	15,06	0,838
HRSDTS	18,72	4,17	19,12	3,73	0,744
PASDTS	19,45	5,14	17,81	3,98	0,210
NSDTS	20,54	4,20	19,19	3,47	0,232
SDSDTS	25,00	6,01	27,47	4,02	0,070
IRSDTS	23,54	2,94	25,03	3,79	0,212
SMSDTS	18,81	4,142	18,50	3,32	0,769

Note: HLBTS: Healthy Lifestyle Behaviors Total Score, HRSDTS: Health Responsibility Sub-Dimension Total Score, PASDTS: Physical Activity Sub-Dimension Total Score, NSDTS: Nutrition Sub-Dimension Total Score, SDSDTS: Spiritual Development Sub-Dimension Total Score, IRSDTS: Interpersonal Relations Sub-Dimension Total Score, SMSDTS: Stress Management Sub-Dimension Total Score

When Table 9 is examined, no statistically significant difference was found between the Total Healthy Lifestyle Behaviors Scores, sub-dimensions total scores and alcohol use according to the independent variable of the alcohol use status of the participants ($p < 0.05$).

Table 10: Comparison of the participants' total scores of SYBDTP and sub-dimensions in terms of their chronic disease status (Independent Sample T-Test)

Dependent variables	Independent variables				p
	Yes N = 7		No N = 104		
	Mean	Std.Dev. (±)	Mean	Std.Dev. (±)	
HLBTS	122,57	11,63	127,31	16,01	0,443
HRSDTS	19,85	2,19	19,02	3,84	0,575
PASDTS	16,57	2,82	18,06	4,18	0,355
NSDTS	18,71	2,87	19,36	3,60	0,641
SDSDTS	27,14	3,89	27,23	4,33	0,958
IRSDTS	23,57	3,77	24,97	3,72	0,339
SMSDTS	16,71	2,69	18,65	3,40	0,144

Note: HLBTS: Healthy Lifestyle Behaviors Total Score, HRSDTS: Health Responsibility Sub-Dimension Total Score, PASDTS: Physical Activity Sub-Dimension Total Score, NSDTS: Nutrition Sub-Dimension Total Score, SDSDTS: Spiritual Development Sub-Dimension Total Score, IRSDTS: Interpersonal Relations Sub-Dimension Total Score, SMSDTS: Stress Management Sub-Dimension Total Score

When Table 10 was examined, no statistically significant difference was found between the participants' Total Healthy Lifestyle Behaviors Score, sub-dimensions total scores and chronic disease status according to the chronic disease status independent variable of the participants ($p < 0.05$).

Table 11: Comparison of the total score and sub-dimensions of healthy lifestyle behaviors in terms of sleep status of the participants (One way Anova test)

Dependent variables	Independent variables						p	Difference between groups
	1 N = 32		2 N = 77		3 N = 2			
	Mean	Std.Dev. (±)	Mean	Std.Dev. (±)	Mean	Std.Dev. (±)		
HLBTS	129,18	17,20	126,53	15,13	111,00	1,41	0,256	-
HRS DTS	19,84	4,73	18,85	3,25	15,50	2,12	0,183	-
PAS DTS	17,93	4,16	17,96	4,10	19,50	6,36	0,870	-
NS DTS	20,06	3,45	19,02	3,60	19,00	2,82	0,383	-
SDS DTS	28,34	3,62	26,98	4,30	18,50	3,53	0,004	1-3
IRS DTS	25,56	4,14	24,70	3,52	21,00	2,82	0,183	-
SMS DTS	17,46	4,11	19,00	2,97	17,50	3,53	0,90	-

Note: HLBTS: Healthy Lifestyle Behaviors Total Score, HRS DTS: Health Responsibility Sub-Dimension Total Score, PAS DTS: Physical Activity Sub-Dimension Total Score, NS DTS: Nutrition Sub-Dimension Total Score, SDS DTS: Spiritual Development Sub-Dimension Total Score, IRS DTS: Interpersonal Relations Sub-Dimension Total Score, SMS DTS: Stress Management Sub-Dimension Total Score; 1= 4-6 hours' sleep, 2=7-9 hours' sleep, 3= 10 hours and above sleep

When Table 11 is examined, there is a statistically significant difference between technicians' healthy lifestyle behaviors total score and sub-dimension total score in terms of sleep status, in favor of technicians who sleep 4-6 hours between technicians who sleep 4-6 hours and technicians who sleep 10 hours or more in the spiritual development sub-dimension total score difference was found. No significant difference was found between the other sub-dimensions and sleep durations ($p < 0.05$).

4. Discussion

The ability to start search and rescue efforts quickly and effectively is closely related to the fact that search and rescue technicians are healthy individuals. It is thought that knowing the healthy lifestyle behaviors of search and rescue technicians can provide useful results in terms of raising awareness about the situation of search and rescue technicians participating in search and rescue efforts and preventing possible negativities. In addition, it is thought that it may be useful to know whether the scores of the sub-dimensions of healthy lifestyle behaviors and the total scores of healthy lifestyle behaviors differ according to various variables.

When the descriptive parameters of the search and rescue technicians participating in the study were evaluated; All of them are male, most of them are married (87.4%), their average age is 42 and over (64.9%), the education level of the participants is mostly at the undergraduate level (77.5%), all of the participants are 7 years and older. have more than 75% of experience, their branches are mostly nature search and rescue and surface search and rescue technicians (74.7%), most of them are overweight (64%) in terms of body mass index values, 90% do not drink alcohol, 44%, It was concluded that 1

of them smoked, 93.7% of them did not have a chronic disease, and 69.4% of them slept between 7-9 hours.

Erdoğan (2007), in her thesis study titled the adequacy of training and development programs of Turkish civil defense search and rescue technicians, which he carried out with 44 participants, stated that; all of them were male, 79.5% were between the ages of 26-35, 34.1% had a bachelor's degree, 77.3% had 6 years or more of experience (9).

Çiçekdağı et al. (2017) reported that from chaos to order: Turkey disaster response plan-Siirt mine accident case study, coordination is very important in disaster management and well-educated healthy individuals can carry out these processes more healthily (10).

Eryiğit et al. (2012) reported that the search and rescue activities carried out by national medical rescue teams consisting of healthcare professionals yielded very successful results (11).

Özmen and Özden (2013), in their study titled A Critical Evaluation of Turkey's Disaster Management System, reported that the disaster management system in Turkey is inadequate and the search and rescue units do not have the necessary equipment (12). Şahin (2009) reported in his study that disaster management and search and rescue operations can only be carried out by well-trained and equipped teams (13).

Kadıoğlu (2008), in his study titled "Basic principles of harm reduction", stated that one of the main purposes of search and rescue activities is to reduce possible damages and that it is possible to achieve this with healthy and well-trained search and rescue technicians (14, 15).

Gürel and Uzunlar (2004), in their study titled "Legal efforts to reduce the economic impacts of natural disasters in Turkey," reported the necessity of determining a natural disaster strategy and the inadequacy of studies on this subject (16).

Sayın and Dağcı (2018) reported in their study titled "Basic principles of planning in disaster preparedness" that one of the most important factors in eliminating the negative effects of disasters is to be prepared, and this can be supported by the creation of well-trained and healthy search and rescue units (17).

As a result, healthy lifestyle behaviors of AFAD search and rescue technicians were not at a sufficient level and it is thought that it would be appropriate to carry out studies to develop them. However, it is thought that the number of female search and rescue technicians is insufficient and it would be beneficial to carry out studies to increase it.

Conflict of Interest Statement

There are no potential conflicts of interest on this article.

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References

1. Kadirioğlu F. T., Kartal R. F., Kılıç T., Kalafat D., Duman T. Y., Azak T. E., et al. (2018). An improved earthquake catalogue ($M \geq 4.0$) for Turkey and its near vicinity (1900–2012). *Bulletin of Earthquake Engineering*; 16(8):3317-38.
2. Allen J. (2008). The ethics of climate change: Right and wrong in a warming world, James Garvey: book review. *African Security Review*;17(3):134-7.
3. Pancar S. (2015). Arama ve kurtarma ekiplerinin fiziksel aktivite düzeylerinin incelenmesi (Bursa örneği): Uludağ Üniversitesi.
4. Yılmaz A. G. K., Motorcu A. R. Safety Culture of Fire and AFAD Employees: Evaluation of Occupational Safety Awareness and Competencies and Their Participation in Occupational Safety Activities According to Demographic Factors.
5. Yılmaz G., Yildirim S. D. (2020). Evaluation of methods and current approaches used in urban search and rescue in disasters. *Journal of Natural Disasters and Environment*;6(1):196-208.
6. Yılmaz B. Y., Hisli Şahin N. T. D. Post-Traumatic Stress Symptoms and Post-Traumatic Growth Related Variables in Search and Rescue Workers: Ankara University Social Sciences Institute Psychology
7. Mustafa A. M. M. (2018). Determination of the Healthy Lifestyles of University Students in Firat University and Influential Factors (Sample of Faculty of Sports Sciences).
8. Bahar Z., Beşer A., Gördes N., Ersin F., Kissal A. (2008). Validity and reliability study of the healthy lifestyle behaviors scale II. *Journal of Cumhuriyet University School of Nursing*;12(1):1-13.
9. Erdoğan N. (2017). The Adequacy of Training and Development Programs of Turkish Civil Defense Search and Rescue Technicians: Istanbul Sample: Marmara University (Turkey).
10. Çiçekdağı H. İ., Tosun Y., Ökenek F., Üzümcü S. A. (2017). From chaos to order: example of Turkey national disaster response plan-Siirt mine accident. *Kastamonu university Journal of the Faculty of Economics and Administrative Sciences*:161-76.
11. Eryigit U., Saraç E., Sayar S., Yetim Ö., Furuncu H., Ocak Z., et al. (2012). NMRT and Trabzon NMRT's Van Ercis earthquake operation/UMKE ve Trabzon UMKE'nin Van-Ercis depremindeki calismalari. *Eurasian Journal of Emergency Medicine* ;11(1):55.
12. Özmen B., Özden T. (2013). A critical evaluation of Turkey's disaster management system. *Journal of Istanbul University Faculty of Political Sciences* (49).
13. Aşikoğlu Şahin G. (2009). Development of mitigation strategies for urban disaster risks: DEU Institute of Science and Technology.
14. Kadioğlu M. Kadioğlu, M. (2008): Risk Management for Flood, Landslide and Avalanche; Turkey Office Publications No: 2, Ankara.

15. Güler H. H. (2008). Basic principles of harm reduction. *Basic Principles of Disaster Mitigation*, 35-50.
16. Gürel N., Uzunlar M. (2004). Legal Efforts to Mitigate the Economic Effects of Natural Disasters in Turkey. *Journal of Advice*; 6(22):245-9.
17. Sayin Y., Dağci M. (2018). Basic Principles of Planning in Disaster Preparedness. *Turkish clinics Surgical Nursing-Special Topics*. 4(3):8-15.

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